ENVIRONMENTAL COMPLIANCE SUMMARY

CALENDAR YEAR 2004

Compliance Program

The West Valley Demonstration Project (WVDP or Project) is currently focusing on several goals that will lead to completion of the WVDP Act. (See Appendix K.) Construction of the remote-handled waste facility, used to process and package radioactive Project waste into shipping containers, was completed in early 2004 and processing of waste began in June 2004. Dismantlement of processing equipment in the vitrification facility began in 2004 and major vessels, including the melter, were removed. Decontamination of several former reprocessing cells within the main process building was completed and management of radioactively contaminated groundwater continued.

In January 2003, the U.S. Department of Energy (DOE), the federal agency that manages the WVDP, issued a directive (DOE Order 450.1) requiring implementation of an environmental management system (EMS) for conducting work at DOE sites, including the WVDP. In response to this directive, the existing WVDP EMS is continuously reviewed and enhanced. Elements of the WVDP EMS are summarized in Table ECS-1.

Activities at the WVDP are regulated by various federal and state laws that protect the public, workers, and the environment.

Major federal environmental laws and regulations applicable to the WVDP are: the Resource Conservation and Recovery Act; the Clean Air Act; the Emergency Planning and Community Right-to-Know Act (enacted as Title III of the Superfund Amendments and Reauthorization Act); the Clean Water Act; the Safe Drinking Water Act; the Toxic Substances Control Act; the Migratory Bird Treaty Act; and the National Environmental Policy Act. These laws are administered primarily by the U.S. Environmental Protection Agency (EPA), the U.S. Fish and Wildlife Service, the U.S. Army Corps of Engineers (ACOE), the New York State Department of Environmental Conservation (NYSDEC), and the New York State Department of Health (NYSDOH) through programs and regulatory requirements for permitting, reporting, inspecting, self-monitoring, and audits.

Because release of radiological and nonradiological materials from an active facility cannot be completely prevented, the EPA, NYSDEC, and DOE have established standards for such emissions and discharges that are intended to protect human health, safety, and the environment. The WVDP applies to the EPA for permits to release limited amounts of radiological constituents to the air and applies to NYSDEC for a permit to release limited amounts of nonradiological constituents to the air and water through controlled and monitored

effluent releases in concentrations determined to be safe for humans and the environment. In general, the permits describe release points, specify management and reporting requirements, list discharge limits on those pollutants likely to be present, and define the sampling and analysis regimen. A summary of permits may be found in Table ECS-2.

Compliance Status

The following summary describes WVDP compliance with DOE Orders 450.1, 5400.5, and 435.1 and federal and state laws and regulations applicable to the Project.

Environmental Protection Program (DOE Order 450.1). DOE Order 450.1, issued in January 2003, requires DOE sites to implement an EMS by December 31, 2005. An EMS is a continuing cycle of systematic planning, implementing, evaluating, and improving processes and actions undertaken to achieve environmental goals. Since 1999, the WVDP has implemented an EMS via policies and procedures that provide for accomplishing work through proactive management, environmental stewardship, and integration of appropriate technologies across all Project functions. The West Valley Nuclear Services Co. (WVNSCO) EMS satisfies the requirements of both the "Code of Environmental Management Principles" for federal agencies and the International Organization for Standardization 14001, "Environmental Management Systems: Specifications for Guidance and Use."

Radiation Protection of the Public and the Environment (DOE Order 5400.5). DOE Order 5400.5, issued in February 1990, established standards and requirements for protection of the public and the environment against undue risk from radiation resulting from activities of the DOE and DOE contractors. The objectives of the Order were to ensure that (1) operations are conducted so that radiation exposures to members of the public are maintained within the limits established in the Order, (2) potential exposures to members of the public are as far below the limits as is reasonably achievable, (3) routine and non-routine releases are monitored and dose to the public is assessed, and (4) the environment is protected from radioactive contamination to the extent practical.

This report summarizes radiological releases from the WVDP in 2004, presents estimates of dose to the public and the environment in 2004, and compares these values with release and dose standards established by DOE Order 5400.5. (See Appendix K[CD].) In 2004, both releases and estimates of dose to the public were well within applicable limits.

Radioactive Waste Management (DOE Order 435.1). DOE Order 435.1 was issued in July 1999, and updated in August 2001, to ensure that all DOE radioactive waste – including high-level waste (HLW), transuranic waste, low-level waste (LLW), and the radioactive component of mixed waste – is managed to (1) protect the public from exposure to radioactive materials, (2) protect the environment, (3) protect workers, and (4) comply with applicable federal, state, and local laws and regulations, as well as applicable Executive Orders and other DOE directives. The "WVDP Radioactive Waste Acceptance Program," a formal document describing how radioactive waste is managed at the WVDP, was updated in August 2004.

Resource Conservation and Recovery Act (RCRA). RCRA was enacted to ensure that hazardous wastes are managed in a manner that protects human health, safety, and the environment. RCRA and its implementing regulations govern the life cycle of hazardous waste from "cradle-to-grave" and mandate that generators take responsibility for ensuring the proper treatment, storage, and ultimate disposal of their wastes. The EPA is the federal agency responsible for issuing guide-

lines and regulations for the proper management of solid and hazardous waste (including mixed [radioactive and hazardous] waste).

In New York, the EPA has delegated the authority to issue permits and enforce these regulations to NYSDEC. In addition, the U.S. Department of Transportation is responsible for issuing guidelines and regulations for labeling, packaging, and spill-reporting for hazardous and mixed wastes while in transit.

A hazardous waste permit is required for facilities that treat or store large quantities of hazardous waste for more than 90 days or dispose of hazardous waste at the facility. New York State facilities in existence on the date that hazardous waste regulations impacting their operations took effect were required to apply for interim status from NYSDEC by submitting a RCRA Part A Permit Application. Facility operations during interim status are limited to those described in the Part A Permit Application and must comply with the Interim Status Standards regulations.

In 1984, the DOE notified the EPA of hazardous waste activities at the WVDP and identified the WVDP as a generator of hazardous waste. In June 1990, the effective date of the New York State regulations governing treatment, storage, and disposal of mixed (i.e., RCRA hazardous and Atomic Energy Commission radioactive) waste, the WVDP filed a RCRA Part A Permit Application with NYSDEC for storage and treatment of hazardous and mixed wastes, and has been operating under interim status ever since.

The WVDP updates its RCRA Part A Permit Application as changes to the site's interim status waste-management operations occur. An updated RCRA Part A Permit Application was submitted to NYSDEC on March 6, 2001. On November 13, 2001, NYSDEC responded that the RCRA Part A Permit modifications met the requirements for changes to interim status treatment and storage operations at the WVDP.

In a July 16, 2003 letter to the DOE, NYSDEC made an official request for the submittal of a Part 373 Permit Application for the WVDP. The complete Part 373 Permit Application was transmitted to NYSDEC on December 23, 2004. Facilities with interim status are treated as having been issued a permit until a final determination by NYSDEC on the Part 373 Permit Application is made.

Hazardous Waste Management Program. Hazardous wastes at the WVDP are managed in accordance with 6 NYCRR Parts 370–374 and 376. Hazardous and mixed waste activities must be reported to NYSDEC each year through the submittal of the facility's annual Hazardous Waste Report. This report summarizes the hazardous waste activities for the previous year, specifies the quantities of waste generated, treated, and/or disposed, and identifies the treatment, storage, and disposal facilities used. The annual Hazardous Waste Report, which reported that the WVDP made no hazardous waste shipments in CY 2004, was submitted to NYSDEC in February 2005.

In addition, a hazardous waste reduction plan must be updated annually and filed every two years. This plan, first submitted to NYSDEC in 1990, documents efforts to minimize the generation of hazardous waste. The hazardous waste reduction plan was updated in 2004, as required. The most recent Annual Status Report for the Hazardous Waste Reduction Program was submitted to NYSDEC in June 2003.

Annual inspections to assess compliance with hazardous waste regulations were conducted by NYSDEC on March 31, 2004 and the EPA on September 23, 2004. No deficiencies were noted.

Mixed Waste Management Program. Mixed waste contains both a radioactive component, regulated under the Atomic Energy Act, and a hazardous component, regulated under RCRA. Both the EPA and NYSDEC oversee mixed waste management at the WVDP.

The Federal Facility Compliance Act of 1992, an amendment to RCRA, requires DOE facilities to prepare plans (specifically, the Site Treatment Plan) for treating their mixed waste inventories and to update these plans annually to account for development of treatment technologies, capacities, and changes in mixed waste inventories. Each plan is approved by the respective state agency or the EPA after consultation with other affected states and after consideration of public comments.

The WVDP's Site Treatment Plan is comprised of two volumes: the Background Volume provides information on each mixed waste stream and information on the preferred treatment method for the waste, and the Plan Volume contains proposed schedules for treating the mixed waste to meet the land disposal restriction requirements of RCRA.

The DOE and NYSDEC entered into a Consent Order on August 27, 1996 that requires the completion of the milestones identified in the Plan Volume. The WVDP began implementing its Site Treatment Plan immediately and updates it annually to bring waste stream, inventory, and treatment information current through September 30, the end of the DOE fiscal year. The final update of fiscal year 2004 activities was sent by the DOE to NYSDEC by the due date of February 15, 2005.

In 2004, the WVDP made no mixed waste shipments.

RCRA §3008(h) Administrative Order on Consent. The DOE and the New York State Energy Research and Development Authority (NYSERDA) entered into a RCRA §3008(h) Administrative Order on Consent with NYSDEC and the EPA in March 1992. The Consent Order required NYSERDA and the DOE's West Valley Demonstration Project Office to conduct RCRA-facility investigations (RFIs) at on-site solid waste management units (SWMUs) to determine if there had been a release or if there is a potential for release of RCRA-regulated hazardous constituents from SWMUs. The final RFI reports were submitted in 1997, completing the investigative activities associated with the Consent Order. No corrective actions were required as a result of the RFIs. Groundwater monitoring, as specified in the RFI reports, continued during 2004. The WVDP also continued to monitor SWMUs and to comply with the requirements of the RCRA §3008(h) Administrative Order on Consent. Groundwater monitoring results are detailed in Chapter 4.

One SWMU was investigated in 2004: a breach in the laundry wastewater line. Notification had been submitted to the EPA and to NYSDEC, as required in 2003.

Pursuant to a request from NYSDEC in a January 2004 correspondence, a report entitled "West Valley Demonstration Project Solid Waste Management Unit Assessment and Current Conditions Report" was submitted to NYSDEC in November 2004. This report summarized the historic activities of individual SWMUs through the RFI activities and provided current environmental monitoring data and information on site activities performed since the completion of the RFI reports.

Nonhazardous, Regulated Waste Management Program. The WVDP shipped approximately 20 tons (18.1 metric tons) of nonradioactive, nonhazardous material off site to solid waste management facilities in 2004. Of this amount, 0.97 tons (0.88 metric tons) of lead-acid batteries and spent lamps (i.e., universal wastes), were reclaimed or

recycled at off-site, authorized reclamation and recycling facilities. The WVDP also shipped approximately 1,070 tons (971 metric tons) of digested sludge and treated wastewater from the site sanitary and industrial wastewater treatment facility to the Buffalo Sewer Authority for disposal.

Waste Minimization and Pollution Prevention. The WVDP continued a long-term program to minimize the generation of LLW, mixed waste, hazardous waste, industrial waste, and sanitary waste, and to promote affirmative procurement as directed by Executive Order 13101 ("Greening the Government Through Waste Prevention, Recycling, and Federal Acquisition") and Executive Order 13148 ("Greening the Government Through Leadership in Environmental Management"), which promote the Affirmative Procurement Program and RCRA §6002, "Federal Procurement." These Executive Orders are also supported by DOE Order 450.1. The Affirmative Procurement Program specifies responsibilities and direction for federal agencies in acquiring recycled and environmentally preferable products and services designated by the EPA in 40 CFR Part 247, "Comprehensive Procurement Guideline for Products Containing Recovered Material." WVNSCO annually reports challenges and successes associated with the purchase and use of these materials and services to the DOE.

For purposes of waste-reduction tracking, waste streams are separated into either waste from sources directly associated with the vitrification process or from nonvitrification sources. See Chapter 1 for further discussion of waste minimization activities from all sources in 2004.

Underground Storage Tanks Program. RCRA regulations also cover the use and management of underground storage tanks and establish minimum design requirements to protect groundwater resources from releases. The regulations, specified in 40 CFR Part 280, require underground storage tanks to be equipped with overfill protection, spill prevention, corrosion protection, and leak detection systems. New tanks must comply with regulations at the time of installation.

New York State also regulates underground storage tanks through two programs – petroleum bulk storage (6 NYCRR Parts 612–614) and chemical bulk storage (6 NYCRR Parts 595–599). State registration and minimum design requirements are similar to those of the federal program except that petroleum tank fill ports must be color coded, using American Petroleum Institute standards, to indicate the product being stored.

A 550-gallon, double-walled, steel underground storage tank, upgraded in 1998 to bring it into compliance with the most recent EPA requirements (40 CFR Part 280.21), is used to store diesel fuel for the supernatant treatment system/permanent ventilation system standby power unit. This tank is equipped with aboveground piping, an upgraded interstitial leak-detection system, and a high-level warning device, and therefore meets the state requirements of 6 NYCRR Parts 612–614. This is the only underground petroleum storage tank currently in use at the WVDP.

A former underground petroleum storage tank, closed in place before the New York State underground storage tank program closure requirements were implemented in 1985, was removed in 1997. In accordance with a stipulation agreement with NYSDEC, a soil bioventing system was installed in August 1999 to remediate localized petroleum contaminated soils in the vicinity of the tank. The system stimulated natural in-situ biodegradation of petroleum hydrocarbons in the soil by providing an abundant oxygen supply to existing soil microorganisms within the contaminated soil zone. Soil and groundwater samples were collected in 2002 to evaluate whether an adequate level of remediation had been achieved. Based on the sample results,

NYSDEC determined that no further remediation was required. Final disposition is pending the Decommissioning and/or Long-Term Stewardship Environmental Impact Statement.

There are no underground chemical bulk storage tanks at the WVDP.

New York State-Regulated Aboveground Storage Tanks. New York State regulates aboveground petroleum bulk storage under 6 NYCRR Parts 612–614, and aboveground hazardous bulk chemical storage under 6 NYCRR Parts 595–599. These regulations require secondary containment, external gauges to indicate the content levels, monthly visual inspections of petroleum tanks, and documented daily, annual, and five-year inspections of chemical tanks. Documentation relating to these periodic inspections is maintained by the WVDP and is available for regulatory agencies to review. Petroleum tank fill ports also must be color-coded, and chemical tanks must be labeled to indicate the product stored.

WVDP registration at the end of 2004 included nine aboveground petroleum tanks: three containing No. 2 fuel oil, one containing unleaded gasoline, and the others containing diesel fuel.

Also registered are eight aboveground chemical storage tanks used as needed to contain nitric acid or nitric acid mixtures. These tanks were emptied in the fall of 2002, and seven of the tanks were permanently closed near the end of 2004. The required submittals were made to NYSDEC to remove these seven tanks from the registration and a new registration certificate is anticipated to be received by the WVDP in early 2005.

In summary, there is one remaining chemical bulk storage tank at the WVDP, with plans under development for closure in 2005.

All the tanks are equipped with gauges and secondary containment systems. The WVDP is in compliance with the most recent requirements to upgrade chemical bulk storage tanks that went into effect in December 1999. The most current inspections by NYSDEC determined that the chemical bulk storage tanks and the petroleum bulk storage tanks were in compliance with New York State regulations.

Medical Waste Tracking. Medical waste can potentially expose humans to infectious diseases and pathogens from contact with bodily fluids. Medical evaluations, inoculations, and laboratory work at the on-site Health Services office regularly generate potentially infectious medical wastes that must be tracked in accordance with NYSDEC requirements (6 NYCRR Part 364.9).

The WVDP has retained the services of a permitted waste hauler and disposal firm to manage these medical wastes. Medical wastes are sterilized with an autoclave by the disposal firm to remove the associated hazard and are then disposed. Fifty-four pounds (25 kg) of medical waste consisting of dressings, protective clothing (such as rubber gloves), and needles, syringes, and other sharps were generated and disposed in 2004.

Clean Air Act (CAA). The CAA, including Titles I through VI, establishes a framework for the EPA to regulate air emissions from both stationary and mobile sources. These amendments mandate that each state establish a program to permit operation of sources of air pollution. In 1996, NYSDEC amended 6 NYCRR Parts 200, 201, 231, and 621 to implement the requirements of the new EPA CAA Title V permitting processes.

In New York State, NYSDEC issues permits for stationary sources that emit regulated pollutants, including hazardous air pollutants. Sources requiring permits are those that emit regulated pollutants

from a particular source (e.g., a stack, duct, vent, or other similar opening), if the pollutants are in quantities above a predetermined threshold.

Radiological Emissions. Air emissions of radionuclides at the WVDP are regulated by the EPA under the National Emission Standards for Hazardous Air Pollutants (NESHAP) regulations, 40 CFR Part 61, Subpart H, "National Emission Standards for Emission of Radionuclides other than Radon from Department of Energy Facilities." The WVDP currently has permits for six radionuclide sources.

In 2004, in compliance with updated stack inspection requirements of 40 CFR 61, Appendix B, Method 114, sampling systems in use for major emission points were inspected and the results were documented. Visual inspections, leak checks, and cleaning were carried out, as appropriate.

Other less-significant sources of radionuclide emissions, such as those from the on-site laundry, do not require permits. Non-point radiological sources of air emissions, such as open-air lagoons, also do not require permits. The WVDP reports the radionuclide emissions from its non-permitted and permitted sources to the EPA annually, in accordance with NESHAP regulations. The annual NESHAP Report is submitted to the EPA by June 30th of the following calendar year. Calculations to demonstrate compliance with NESHAP radioactive dose limits showed CY 2004 doses to be approximately 0.02% of the 10 millirem standard.

Nonradiological Emissions. Nonradiological point sources of air emissions are regulated by NYSDEC. Major source facilities are required by 6 NYCRR Part 201 to file a Title V Permit Application unless emissions are capped below operating limits. The WVDP submitted – and received NYSDEC's approval of – a plan for capping oxides of nitrogen (NO_x) and sulfur dioxide (SO_2) at 99 tons each. Shutdown of the melter in September 2002 significantly reduced levels of NO_x and SO_2 at the WVDP, leaving site boilers and generators as the remaining contributors. An application made to NYSDEC to change the New York State Facility Air Permit to an Air Facility Registration Certificate was approved on October 28, 2004.

Air permits that were in effect at the WVDP in 2004 are included in Table ECS-2, West Valley Demonstration Project Environmental Permits. There were no air permit or regulatory exceedances in 2004. (See also Table ECS-3.)

Emergency Planning and Community Right-to-Know Act (EPCRA). EPCRA was designed to create a working partnership between industry, business, state and local governments, public health and emergency response representatives, and interested citizens. EPCRA is intended to address concerns about the effects of chemicals used, stored, and released in local communities.

Executive Order 13148, Greening the Government Through Leadership in Environmental Management, requires all federal agencies to comply with the following EPCRA provisions: planning notification (Sections 302–303), extremely hazardous substance (EHS) release notification (Section 304), material safety data sheet (MSDS)/chemical inventory (Sections 311–312), and toxic release inventory (TRI) reporting (Section 313). The WVDP continued to comply with these provisions in 2004, as shown in Table ECS-4.

• WVDP representatives participated in semiannual meetings of the Cattaraugus County Local Emergency Planning Committee (EPCRA Sections 302–303). WVDP representatives also attended meetings held by the Cattaraugus and Erie County Emergency Management Services concerning WVDP and other local emergency planning activities. Area hospitals and the West Valley

Volunteer Hose Company continued to participate in on-site briefings, emergency response exercises, and information exchanges concerning hazardous-substance management at the WVDP. The WVDP continues to interface with off-site organizations with which Memoranda of Understanding or Letters of Agreement exist. These organizations are annually provided an opportunity to participate in a site tour and update to better understand on-site hazards for emergency response.

• Compliance with all EPCRA reporting requirements was maintained and all required reports were submitted within the required timeframe. There were no releases of EHS at the WVDP that triggered the release notification requirements of EPCRA Section 304.

• Under EPCRA Section 311 requirements, the WVDP reviews information about reportable chemicals every quarter. If a hazardous chemical not previously reported is present on site in an amount exceeding the threshold planning quantity, an MSDS and an updated hazardous chemical list are submitted to the state and local emergency response groups. This supplemental reporting ensures that the public and emergency responders have current information about hazardous chemicals at the WVDP. No new chemicals were added to the hazardous chemicals list in 2004 and no additional EPCRA Section 311 notifications were required.

• Under EPCRA Section 312 regulations, the WVDP submits annual reports to state and local emergency response organizations and fire departments specifying the quantity, location, and hazards associated with chemicals stored on site. In 2004, nine reportable chemicals were stored at the WVDP above threshold planning quantities. A list of reportable chemicals is provided in Table ECS-5.

• Under EPCRA Section 313, the WVDP provides information about releases to all environmental media of EPA-listed TRI chemicals used at or above specified regulatory thresholds at the WVDP. In 2004, no chemical exceeded the reporting threshold for the EPCRA Section 313 report.

Clean Water Act (CWA). Section 404 of the CWA regulates the development of areas in and adjacent to waters of the United States. Supreme Court interpretations of Section 404 have resulted in the inclusion of certain non-isolated wetlands in the regulatory definition of waters of the United States. Section 404 regulates the disposal of solids, in the form of dredged or fill material, into these areas by granting the Army Corps of Engineers the authority to designate disposal areas and issue permits for these activities. Executive Order 11990, "Protection of Wetlands," directs federal agencies to "avoid to the extent possible the long- and short-term adverse impacts associated with the destruction or modification of wetlands and to avoid direct or indirect support of new construction in wetlands wherever there is a practical alternative." Article 24 of the New York State Environmental Conservation Law also contains requirements for the protection of freshwater wetlands.

Also, Section 401 of the CWA requires applicants for a federal license or permit pursuant to Section 404 to obtain certification from the state that the proposed discharge complies with effluent- and water-quality-related limitations, guidelines, and national standards of performance, identified under Sections 301–303, 306–307, and 511(c) of the CWA. The EPA delegated administration of this program to New York State.

Section 1102 of the CWA regulates process, sanitary, and other effluent discharges to surface waters. Administration of Section 402 in New York is delegated to NYSDEC.

Wetlands. Jurisdictional wetlands are defined in Section 404 of the CWA as those satisfying specific technical criteria related to vegetation, soils, and hydrologic conditions. The WVDP notifies the ACOE and NYSDEC of proposed actions that could affect wetland units not specifically exempted from regulation or notification.

As a result of field assessments completed in 1998, 1999, and 2000, 83 jurisdictional wetlands ranging in size from 0.01 to 8.6 acres, a total of approximately 53 acres (22 ha) of wetland, were identified within the WVDP and adjacent parcels. This wetland delineation was submitted to the ACOE for verification of the wetland boundaries.

In 2003, remapping of site parcels to delineate wetland boundaries was initiated and completed to renew the five-year wetland map. A wetland map report was prepared and submitted to the ACOE for review and approval in the fall of 2004.

State Pollutant Discharge Elimination System (SPDES) Permit Modification. In response to a permit application filed in July 2003, NYSDEC issued a draft modification to the SPDES permit in May 2004 for public comment. The final modified permit was issued in November 2004 to take effect January 1, 2005. In addition to five existing permitted monitoring points, the modified permit authorizes discharges at 20 storm water outfalls. These outfalls receive storm water runoff from inactive waste disposal areas, areas where materials or wastes are stored or handled, and areas where construction or structure dismantlement or other soil disturbance activities may be performed. The modified SPDES permit contains sampling and analysis requirements and limits for storm water discharges at these outfalls.

Other changes to the SPDES permit that took effect January 1, 2005 include reduced monitoring at outfall 001 (WNSP001), reduced reporting frequency for the mercury analytical method study, new requirements for reporting water treatment chemical usage, added monitoring for chemical substances used for weed control, and a new requirement to prepare and implement a Storm Water Pollution Prevention Plan.

NYSDEC SPDES Inspection. In May and September 2004, NYSDEC completed its annual facility inspections of the WVDP with observations of the SPDES outfalls, the site sanitary and industrial wastewater treatment facility (WWTF), low-level waste treatment facility (LLWTF), and discharge monitoring records. No deficiencies were identified.

Process Sewer Integrity Evaluation. In 2002, NYSDEC requested that the integrity of the site process sewer system be assessed. This assessment was requested after an unplanned release occurred in 2001, when boiler wastewater was released through a suspected leaking underground sanitary sewer. Later in 2002, the WVDP issued a report evaluating the condition of the process sewer system, with a plan for an inspection of accessible lines between the main process building and the LLWTF.

Video camera inspection of the process sewer lines was initiated in 2003. During this inspection, a hole was discovered in a tributary line where laundry wastewater was released. The breached line was removed from service and laundry wastewater flow was diverted to another line with known integrity. Reports of this discovery were filed with NYSDEC in November and December 2003. Video inspection of process sewer lines was completed in the fall of 2004 and no other sewer integrity issues were identified. The final report and video recordings were submitted to NYSDEC for review in the fall of 2004.

SPDES-Permitted Outfalls. Point-source liquid effluent discharges to surface waters of New York

State are permitted through the New York SPDES program. In 2004, the WVDP had five SPDES-permitted compliance points for discharges to Erdman Brook and Frank's Creek.

• Outfall 001 (WNSP001) discharges treated wastewater from the LLWTF and the north plateau groundwater recovery system. The treated wastewater is held in lagoon 3, sampled and analyzed, then periodically released after notifying NYSDEC. In 2004, eight batches totaling 15.0 million gallons (56.6 million liters) were released. The annual average concentration of radioactivity at the point of release was approximately 21.2% of DOE-derived concentration guides (DCGs). None of the individual releases exceeded the DCGs.

• Outfall 01B (WNSP01B) is an internal process compliance point established by the final SPDES permit modification issued on July 15, 2002. This internal outfall receives effluent from the liquid waste treatment system (LWTS) evaporator process after passing through a mercury pretreatment system. The LWTS pretreats residual radioactive wastes from the main process building and the HLW storage tanks before final polishing treatment at the LLWTF. Effluent is sampled and tested at this location to determine compliance with Federal Great Lakes Initiative and SPDES permit requirements for total mercury. In 2004 the LWTS was not operated, therefore no discharges were released from outfall WNSP01B.

• Outfall 007 (WNSP007) discharges the effluent from the WWTF, which treats sewage and various nonradioactive wastewaters from physical plant systems (e.g., water plant production residuals and boiler blowdown). The average daily flow at WNSP007 in 2004 was approximately 24,000 gallons (91,000 liters).

• Outfall 008 (WNSP008) formerly discharged groundwater and surface water runoff directed from the northeast side of the site's LLWTF lagoon system through a French drain to Erdman Brook. This outfall was capped off in May 2001, and no discharges were released from the outfall in 2004.

• Monitoring point 116, located in Frank's Creek, represents the confluence of discharge from outfalls 001, 007, and 008; base stream flow; wet weather flows (e.g., surface water runoff); groundwater seepage; and augmentation water (untreated water from the site reservoirs). Monitoring point 116 is not a physical outfall but a location where the combination of source-flow inputs is used to calculate values for determining compliance with SPDES permit limits for total dissolved solids (TDS) during discharge of lagoon 3. Before discharge of lagoon 3, sample data for TDS and flow measurements from upstream sources are used to calculate the amount of augmentation water and lagoon 3 flow needed to maintain compliance with SPDES-permitted TDS limits.

As shown in Figure ECS-1, the annual number of effluent exceptions specified in the site's SPDES Permit have been substantially reduced, especially when compared to the peak of 35 exceptions noted in 1986. As indicated in this figure, there was one permit effluent limit exception recorded during 2004.

A test result for total suspended solids (TSS) for a sample obtained at outfall 001 in May 2004 was reported above the allowable (daily maximum) effluent limit. The increased TSS was caused by a storm event that resulted in runoff that carried soil and sediment down the sides of the effluent-holding lagoon and into the effluent water during the discharge.

In June 2004, the minimum permit requirement for monitoring total recoverable hexavalent chromium at outfall 001 was not met. An analytical interference resulted in an inaccurate and invalid test re-

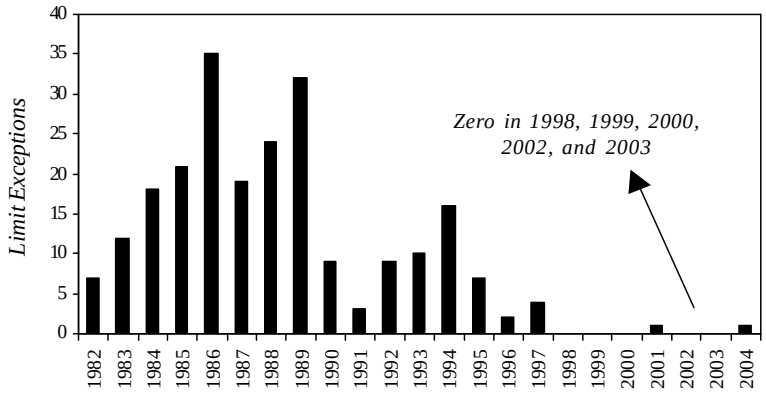

Figure ECS-1. WVDP SPDES Effluent Limit Exceptions

sult for one sample that was analyzed for this chemical substance. As a consequence, the number of valid sample analyses was one short of that required. (See Table ECS-6.)

North Plateau Groundwater Recovery System. In November 1995, the WVDP installed a groundwater recovery system to mitigate the movement of strontium-90 in groundwater and reduce groundwater seepage northeast of the process building. Three recovery wells, installed near the leading edge of the groundwater plume, collect contaminated groundwater from the underlying sand and gravel unit for treatment at the low-level waste treatment building using ion-exchange to remove strontium-90. After the groundwater is processed, it is discharged to lagoon 4 or 5 of the LLWTF. Approximately 39 million gallons (148 million liters) of groundwater have been processed through the system since its inception, including about 4.8 million gallons (18 million liters) in 2004.

In 1999, the Project installed a pilot-scale permeable treatment wall (PTW) to test this in-situ passive technology for treating contaminated groundwater. Analytical data collected from within and around the wall indicate that only a portion of the contaminated groundwater in this area is being treated by the PTW. The hydrogeologic evaluation of the pilot test, completed in 2002, concluded that complex hydrogeologic conditions and disturbances from the installation are influencing groundwater flow into and around the pilot PTW.

Petroleum- and Chemical-Product Spill Reporting. The WVDP has a Spill Notification and Reporting Policy to ensure all spills are properly managed, documented, and remediated in accordance with applicable regulations. This policy identifies departmental responsibilities for spill management and proper spill-control procedures. The policy stresses the responsibility of each employee to notify the plant systems operations shift supervisor upon discovery of a spill. This first-line reporting requirement helps to ensure spills are properly evaluated and managed.

Under a 1996 agreement with NYSDEC, the WVDP is not required to report a spill of petroleum products onto an impervious surface if the spill is less than 5 gallons (19 liters) and is cleaned up within two hours of discovery. Any spill of 5 gallons or less onto the ground is entered into a petroleum spill log that is submitted monthly to NYSDEC on the fifteenth day following the subject month. A spill of more than 5 gallons on any surface must also be logged and reported within two hours to the NYSDEC hotline. A spill of any amount that enters state waters must be reported to the NYSDEC hotline within two hours of discovery and, if it has reached navigable state waters, also reported to the National Response Center. No reportable spills of over 5 gallons of petroleum products to an impervious surface, or to the ground or waters of the state, occurred at the WVDP in 2004.

The WVDP also reports spills or releases of hazardous substances in accordance with reporting requirements of RCRA, the Comprehensive Environmental Response, Compensation, and Liability Act (if a reportable quantity has been exceeded), and the CAA, EPCRA, CWA, and Toxic Substances Control Act (TSCA). No chemical spills or releases exceeded reportable quantities and, thus, no reporting during CY 2004 was required.

Any spill or release is cleaned up in a timely manner in accordance with the "WVDP Spill Notification and Reporting Policy," thereby minimizing any effects on the environment. Debris generated during cleanup is characterized and dispositioned appropriately.

Safe Drinking Water Act (SDWA). The SDWA requires that each federal agency operating or maintaining a public water system must comply with all federal, state, and local requirements regarding safe drinking water. Compliance with regulations promulgated under the SDWA in the state of New York is overseen by NYSDOH through county health departments.

The WVDP obtains its drinking water from surface water reservoirs on the Western New York Nuclear Service Center (WNYNSC) and is considered a non-transient, non-community public water supplier. The WVDP's drinking water treatment facility purifies the water by clarification, filtration, and chlorination before it is distributed on site.

Monitoring. As an operator of a drinking water supply system, the WVDP routinely collects and analyzes drinking water samples to monitor water quality. Results of these analyses are reported to the Cattaraugus County Health Department (CCHD), which also independently analyzes a monthly sample of WVDP tap water to determine bacterial and residual chlorine content, and an annual WVDP tap water sample for nitrate (as nitrogen).

Results for microbiological analysis of monthly tap water samples collected in 2004 indicated that total coliform and *E. coli* were not present in the potable water distribution system. Monthly tap water sample results for residual chlorine were positive on all occasions, indicating proper disinfection. The annual result for nitrate was also within the drinking water limit.

In the fall of 2004, the CCHD agreed to reduce monitoring for disinfection by-products (DBPs) to an annual collection as test results continued to indicate that the site is of low risk to exceed the maximum contaminant levels (MCLs) for these substances. Quarterly sample results for DBP precursors, including total trihalomethanes and five haloacetic acids, were below MCLs for these parameters. Monthly sample results for DBP precursors, including total organic carbon and alkalinity, were also below treatment system performance standards.

Cross-Connection Control. The SDWA requires that public water suppliers prevent cross-connections between the potable water supply and systems containing hazardous or infectious substances. Cross-connection control devices, such as double check valves and reduced-pressure zone valves, must be installed, inspected, and maintained at strategic locations at facilities where hazardous materials are used in a manner that could result in their introduction into the potable water distribution system under low pressure conditions. The WVDP has a total of 13 backflow prevention devices, all of which were tested and repaired as necessary by a NYSDOH-licensed tester (in 2003) to ensure that all devices are functioning properly.

NYSDOH and CCHD Inspection. In September 2004, the CCHD and NYSDOH completed an inspection of the drinking water production and supply facilities. No deficiencies were identified.

Toxic Substances Control Act. TSCA regulates the manufacture, processing, distribution, and use of chemicals, including asbestos-containing material (ACM) and polychlorinated biphenyls (PCBs).

Asbestos-Containing Material. In 2004, the WVDP continued to maintain compliance with all TSCA requirements pertaining to asbestos by managing ACM at the site in accordance with the Asbestos Management Plan (WVNSCO, revised December 6, 2002). The plan was prepared to ensure compliance with TSCA requirements and includes requirements for limiting worker exposure to ACM and for asbestos-abatement projects, maintenance activities, and periodic surveillance inspections (at least once every three years). The plan also identifies the inventory and status of on-site ACM.

Activities in 2004 included the repair or abatement of damaged/friable ACM, removal of less than 34 linear feet of ACM insulation from abandoned lines, and maintenance of signs and labels to warn workers of ACM. All activities associated with ACM are completed by personnel who are certified by the New York State Department of Labor (NYSDOL). WVNSCO maintains an asbestos-handling license issued by NYSDOL.

Polychlorinated Biphenyls. Because PCBs are regulated as a hazardous waste in New York State, the WVDP continued in 2004 to manage radioactively contaminated PCB waste as mixed waste and nonradioactive PCB waste as hazardous waste. Details concerning PCB-contaminated radioactive waste management, including a description of the waste, proposed treatment technologies, and schedules, can be found in Section 3.1.5 of the Site Treatment Plan, Fiscal Year 2004 Update (WVNSCO, February 10, 2005).

To comply with TSCA and PCB regulations, all operations associated with PCBs comply with the PCB and PCB-Contaminated Material Management Plan. The WVDP also maintains an annual document log that details PCB use, appropriate on-site storage, and any changes in storage or disposal status. The WVDP complies with regulations for disposal of PCBs, which conditionally allow radioactive and nonradioactive PCBs to be stored for more than one year (40 CFR Parts 750 and 761).

National Environmental Policy Act (NEPA). NEPA, as amended, establishes a national policy to ensure protection of the environment is included in federal planning and decision-making (Title I). Its goals are to prevent or eliminate potential damage to the environment that could arise from federal legislative actions or proposed federal projects.

Nationwide Management of Waste. In May 1997, DOE Headquarters issued the Final Waste Management Programmatic Environmental Impact Statement (EIS) to evaluate nationwide management and siting alternatives for treatment, storage, and disposal of five types of radioactive and hazardous waste. The alternatives address waste generated, stored, or buried over the next 20 years at 54 sites in the DOE complex.

The Final Waste Management Programmatic EIS was issued with the intent of developing and issuing separate records of decision for each type of waste analyzed. In 1998, the DOE issued records of decision for transuranic and non-wastewater hazardous waste. In 1999, the DOE issued the record of decision for HLW. This decision specifies that WVDP vitrified HLW will remain in on-site storage until it is accepted for disposal at a geologic repository.

On February 25, 2000, the DOE issued its record of decision for the management of LLW and mixed LLW, including West Valley's wastes. Hanford and the Nevada Test Site (NTS) were identified as

designated national DOE disposal sites for these waste types (Volume 65, Federal Register [FR], p. 10061 [65 FR 10061]). In 2001, West Valley successfully completed the program approval process for access to the NTS, and on July 17, 2001 received approval to ship. Twenty LLW shipments were sent to NTS in 2004.

Decommissioning and/or Long-Term Stewardship at the WVDP and WNYNSC. DOE published a Federal Register Notice of Intent (NOI) on March 26, 2001 (66 FR 16447) formally announcing its rescoping plan and preparation of the waste management EIS. DOE published an NOI on March 13, 2003 (68 FR 12044) announcing its intent to prepare, in cooperation with NYSERDA, a Decommissioning and/or Long-Term Stewardship EIS. The DOE and NYSERDA are joint lead agencies on this EIS, while the EPA, U.S. Nuclear Regulatory Commission, and NYSDEC are cooperating agencies. Work on preparation of the Decommissioning and/or Long-Term Stewardship EIS continued in 2004.

In May 2003, the DOE issued a draft of the Waste Management EIS (68 FR 26587) for public comment. The DOE considered public comments and issued the final EIS in January 2004.

Migratory Bird Treaty Act. The WVDP monitors wildlife activity near WVDP work areas and, where possible, implements controls to prevent and minimize nesting of migratory birds within radiologically contaminated areas of the site.

In July 2004, the U.S. Fish and Wildlife Service and NYSDEC renewed the bird depredation permit and license to allow for the removal of migratory bird nests. See Table ECS-7 for a summary of the bird depredation action taken at the WVDP during 2004.

Endangered Species Act. The WVDP periodically updates its information about the potential for federally listed or proposed endangered or threatened species in the vicinity of Project activities. This was last done via correspondence with the U.S. Fish and Wildlife Service in October 2003. Their reply on October 23, 2003 reconfirmed that, "except for occasional transient individuals," no plant or animal species protected under the Endangered Species Act were known to exist at the WVDP.

In December 2003, the WVDP submitted an inquiry to the NYSDEC's Natural Heritage Program seeking information in the state database of the potential for rare or endangered species or threatened ecological communities within the site premises. Corollary information was received from NYSDEC on January 26, 2004 confirming the absence of known New York State protected or endangered species at the WVDP.

Current Achievements and Program Highlights

Vitrification Cell Dismantlement. The WVDP's successful HLW vitrification program was the first program of that type in the nation to reach completion. The vitrification facility was closed in September 2002 after a total of 275 containers of vitrified HLW had been produced. Dismantlement of the vitrification cell continued through 2004. By the end of the year, all major vessels had been removed and packaged. Removal of remaining components is planned for 2005.

Process Cells in the Main Plant Decontaminated. Decontamination of three former process cells in the main plant, the process mechanical cell, the general purpose cell, and extraction cell 2, was completed in 2004.

Remote-Handled Waste Facility Started Up. Construction of the remote-handled waste facility was completed in early 2004, readiness reviews were conducted, and processing of radioactive waste in the facility began in June 2004.

Sodium-Bearing Wastewater Solidified. Sodium-bearing wastewater, a mixed LLW, was solidified into storage containers in the fall of 2004.

Waste Shipping Continued. Off-site shipments of LLW continued in 2004. The rail spur to the site was repaired in the summer of 2004 to facilitate rail shipments of waste.

Integrated Safety Management System (ISMS). In August 2003, a self-assessment was conducted to confirm that the WVDP's integrated environmental, safety, and health management system continues to be effectively implemented at the WVDP. Results from the self-assessment were verified in the DOE's annual review, conducted in November 2004.

The WVDP continues to demonstrate its commitment to an all-inclusive approach to safety through its safety programs and through ongoing efforts to strengthen its integrated safety management program by encouraging worker involvement.

STAR Status. The WVDP has reaffirmed its commitment to DOE's Voluntary Protection Program (VPP). During the reporting period, the VPP was reviewed as part of the annual ISMS review. The DOE has also completed a programmatic review of the VPP and has recertified the WVDP as a DOE-VPP STAR site. At the annual VPP Participants National Conference, WVNSCO was awarded the DOE's Legacy of Stars Award, which is given to sites that maintain an outstanding safety record over a three-year period. WVNSCO is the first and only DOE contractor to receive this award.

In addition, the WVDP has been actively promoting VPP in the community by mentoring local businesses and providing assistance to support the Occupational Safety and Health Administration with VPP evaluations of other sites.

EPA National Environmental Performance Track. The WVDP was recognized as a top environmental leader in 2000 and was accepted into the EPA's National Environmental Performance Track. The WVDP was awarded Charter Member status as part of the first group of applicants. To qualify for the award, the WVNSCO had to demonstrate that it voluntarily has adopted and implemented an EMS, has attained previously specified environmental objectives, has made a commitment to achieve four future goals, has a public outreach program, and has a sustained record of environmental compliance.

In 2004 the WVDP re-applied to the EPA for continued membership in the Performance Track program. The WVDP renewal request was accepted in December 2004. Three new commitments have been established and are outlined in Table ECS-1.

Environmental Management System. The WVDP EMS is integrated with other safety management and work planning processes at the WVDP. In August 2004, a self-assessment of the WVDP environmental compliance program was completed by WVNSCO and it was concluded that required elements of the program are being implemented. An annual review by the DOE in November 2004 confirmed the results of the WVNSCO self-assessment.

Environmental Issues and Actions

Closed Landfill Maintenance. Closure of the on-site nonradioactive construction and demolition debris landfill (CDDL) was completed in August

1986. The landfill area was closed in accordance with NYSDEC requirements for this type of landfill, following a closure plan (Standish, 1985) approved by NYSDEC. To meet routine post-closure requirements, the CDDL cover was inspected twice in 2004 and found to be in generally good condition. The grass cover on the clay and soil cap is routinely maintained and cut, and drainage is maintained to ensure that no obvious ponding or soil erosion occurs.

Railroad Spur Rehabilitation. In 2004, a section of the bed for the railroad spur on the WNYNSC was rehabilitated to support future use of this rail line for waste shipments. Prior to removal, the rail bed soil material was sampled and tested for chemical constitutents that are typically found in soils associated with rail lines, to identify appropriate soil management practices. The test results indicated the soil did not have any appreciable contamination, with all results within soil cleanup objectives specified in NYSDEC guidance, Technical Administrative Guidance Memorandum #4046, "Determination of Soil Clean-Up Objectives and Clean-Up Levels." The removed soil material was placed at the southeast corner of the WVDP premises, where it was subsequently stabilized with a vegetative cover to prevent sediment transport by storm water runoff.

Decommissioning and/or Long-Term Stewardship at the WVDP and WNYNSC. Although negotiations conducted between the DOE and NYSERDA to date have not resulted in agreement on long-term cleanup responsibilities, both parties remain committed to accomplishing important goals. These include completing EIS analyses to support decisions on site decommissioning and/or long-term stewardship. Other important Project goals include safely managing LLW, operating the remote-handled waste facility, and managing contaminated groundwater on the north plateau.

Project Assessment Activities in 2004

As the primary contractor for the DOE at the WVDP, WVNSCO maintains a comprehensive review program for proposed and ongoing operations. Assessments are conducted through formal surveillances and informal programs. Formal surveillances monitor compliance with regulations, directives, and DOE Orders. The informal program is used to identify issues or potential problems that can be corrected immediately.

The local DOE Project office and other agencies with responsibilities for the WVDP also independently review various aspects of the environmental and waste management programs, as discussed in preceding sections. In 2004, overall results reflected continuing, well-managed environmental programs at the WVDP.

Compliance Tables

DOE Headquarters uses environmental compliance summary information from sites across the DOE complex to compile national environmental summary reports. The tables on the following pages were prepared to assist in this compilation.

Table ECS-1
Elements of the Environmental Management System (EMS) Implementation at the WVDP

Environmental Policy	The WVDP environmental policy is to conduct all activities, including design, construction, testing, startup, commissioning, operation, maintenance, and decontamination and decommissioning in a manner appropriate to the nature, scale, and environmental impacts of these activities. The WVDP is committed to full compliance with applicable federal and New York State laws and regulations for the protection of the environment, continual improvement, the prevention and/or minimization of pollution, and public outreach, including stakeholder involvement.
Environmental Aspects and Impacts	When operations have an environmental aspect, WVDP implements the EMS to minimize or eliminate any adverse potential impact. The EMS is a prerequisite for the EPA National Environmental Performance Track awarded by the EPA to the WVDP. Using the EMS, the WVDP evaluates its operations, identifies the aspects of operations that can impact the environment, and determines those impacts that are significant. The WVDP has determined that the following operational aspects have the potential to affect the environment: • Waste generation and management • Atmospheric emissions • Liquid effluents • Storage or use of chemicals and radioactive materials • Natural resource usage - power and water consumption • Noise • Soil disturbance • Disturbances to endangered species/protected habitats • Contamination areas from historical operations • Facility operations, maintenance, and decontamination activities • Other facility-specific compliance aspects.

Table ECS-1 (continued)
Elements of the Environmental Management System Implementation at the WVDP

Legal and Other Requirements	The WVDP has implemented an environmental regulatory review and assessment process to deliver WVDP-level requirements and guidance to all staff. New or revised requirements (e.g., new regulations) are analyzed to determine their applicability to the WVDP and to identify whether actions are required to achieve compliance. This may involve developing or revising WVDP documents or operating procedures, implementing administrative controls, providing training, installing engineered controls, or increasing monitoring.
Objectives and Targets	The performance-based management system is designed to develop, align, balance, and implement the WVDP's strategic objectives, including environmental objectives. Objectives and targets are developed by calendar year (CY). For the three-year period of CY 2004–2006, the following objectives were also commitments made under the EPA National Environmental Performance Track: • Commitment 1 - Reduce the amount of Halon 1301 on site. The 2003 baseline was 580 pounds. Results: CY 2004 - Exceeded commitment by shipping 603 lbs. • Commitment 2 - Reduce total energy usage by 10%. The 2003 baseline was about 166,000 million British thermal units (MMBTUs). Results: CY 2004 - Exceeded commitment by reducing to about 144,000 MMBTUs, a reduction of 13%. • Commitment 3 - Reduce radiological curies in wastewater discharges by 10%. The 2003 baseline was 0.0145 curies (Ci). Results: CY 2004 - Exceeded commitment by reducing to 0.0125 Ci, a reduction of 14%.
Environmental Management Program	The WVDP has a pollution prevention program to conserve resources and minimize waste generation. The WVDP budgeting system is designed to ensure that priorities are balanced and that resources essential to the implementation and control of the EMS are provided.
Structure and Responsibility	All employees at the WVDP have specific roles and responsibilities in key areas, including environmental protection. Environmental and waste management technical support personnel assist the line organization with their environmental responsibilities.

Table ECS-1 (continued)
Elements of the Environmental Management System Implementation at the WVDP

Training, Awareness and Competence	Training on EMS requirements has been provided to staff whose responsibilities include environmental protection. The training program includes general environmental awareness for all employees, regulatory compliance training for select staff, and specific courses for managers, internal assessors, EMS implementation teams, and operations personnel whose work can impact the environment.
Communication and Community Involvement	The WVDP continues to improve processes for internal and external communications on environmental issues. Communications with the local community include monthly meetings with the local Citizen Task Force and meetings with the general public on a quarterly basis. Notable community involvement activities by the WVDP in 2004 included the Annual Food Drive and participation in the United Way Day of Caring.
EMS Documentation	The WVDP has comprehensive, up-to-date written environmental policies describing the EMS. Written procedures and manuals inform staff how to control processes and perform work at the WVDP in a manner that protects the environment.
Document Control	The WVDP maintains a comprehensive electronic document control system to ensure the effective management of procedural documents. When facilities require additional procedures to control their work, document-control protocols are implemented to ensure that workers have access to the current version of procedures.
Operational Control	WVDP operations are evaluated for the adequacy of current controls to prevent impacts to the environment. As needed, additional administrative or engineered controls are identified and plans for upgrades and improvements are developed and implemented.
Emergency Preparedness and Response	The WVDP has an emergency preparedness and response program and specialized staff to provide timely response to hazardous material releases or other environmental emergencies. This program includes procedures for preventing, as well as responding to, emergencies.

Table ECS-1 (concluded)
Elements of the Environmental Management System Implementation at the WVDP

Monitoring and Measurement	Liquid effluent and air-emission monitoring helps ensure the effectiveness of controls, adherence to regulatory requirements, and timely identification and implementation of corrective measures. The WVDP has a comprehensive, sitewide environmental monitoring program. Results are reported to regulatory agencies and summarized in this Annual Site Environmental Report. In addition, the WVDP assesses monitoring data for adverse trends to determine site performance, impacts from site conditions, and the need for proactive or corrective measures.
Nonconformance and Corrective and Preventive Actions	The WVDP continues to implement processes that identify and correct problems. This includes a lessons learned program to prevent recurrences, robust self-assessment and environmental assessment programs, and an electronic action tracking system.
Records	EMS-related records, including audit and training records, are maintained to ensure integrity, facilitate retrieval, and protect from loss.
EMS Audit	To periodically verify that the EMS is operating as intended, assessments are conducted by the DOE and its contractors. These assessments are designed to ensure that nonconformances are identified and addressed. In addition, compliance with regulatory requirements is verified through routine inspections, operational evaluations, and periodic assessments and self-assessments.
Management Review	In addition to audits, a management review process has been established to involve top management in the overall assessment of environmental performance, the EMS, and progress toward achieving environmental goals. This review also identifies, as necessary, the need for changes to and continual improvement of the EMS.

Table ECS-2
West Valley Demonstration Project Environmental Permits

Permit Name and Number	*Agency/Permit Type*	*Description*	*2004 Changes*	*Status*
West Valley Demonstration Project RCRA Part A Permit Application	NYSDEC/Hazardous Waste	Provides interim status under RCRA for treatment and storage of hazardous waste	No changes to Part A. A Part B Permit Application was submitted on December 23, 2004.	No expiration date.
Air Facility Registration Certificate (9-0422-00005/00099)	NYSDEC/Air Emissions	Sitewide permit includes: • 2 boilers	The State Facility Air Permit was changed to an Air Facility Registration Certificate.	Effective 10/28/04. No expiration date.
Slurry-fed ceramic melter (modification to WVDP-687-01) process building ventilation	EPA/NESHAP	Slurry-fed ceramic melter radionuclide emissions — main plant stack modified 2/18/97	None	Permit approved 2/18/97. No expiration date. Request to modify submitted to the EPA 8/99.
Vitrification Facility Heating, Ventilation, and Air-Conditioning (HVAC) System	EPA/NESHAP	Vitrification facility HVAC system for radionuclide emissions	None	Permit approved 2/18/97. No expiration date.
01-14 Building Ventilation System (WVDP-187-01)	EPA/NESHAP	Liquid waste treatment system ventilation of radionuclide emissions in the 01-14 building	Charcoal filters were temporarily installed to treat emissions from sodium-bearing waste for a three-month period. Upon completion, the system was returned to normal.	Issued 10/5/87. Modified 5/25/89. No expiration date.
Contact Size-Reduction Facility (WVDP-287-01)	EPA/NESHAP	Contact size-reduction and decontamination facility radionuclide emissions	None	Issued 10/5/87. No expiration date.
Supernatant Treatment System/Permanent Ventilation System (WVDP-387-01)	EPA/NESHAP	Supernatant treatment system ventilation for radionuclide emissions	None	Revised 1/1/97. No expiration date.
Outdoor Ventilated Enclosures (WVDP-587-01)	EPA/NESHAP	Ten portable ventilation units for removal of radionuclides	None	Issued 12/22/87. No expiration date.
State Pollutant Discharge Elimination System (NY0000973)	NYSDEC/Water	Covers discharges to surface waters from various on-site sources	None	An amended permit addressing storm water discharges, monitoring modifications, and other items takes effect 1/1/05. Expires 02/01/09.

Table ECS-2 (concluded)
West Valley Demonstration Project Environmental Permits

Permit Name and Number	*Agency/Permit Type*	*Description*	*2004 Changes*	*Status*
Buffalo Pollutant Discharge Elimination System (04-05-TR096)	Buffalo Sewer Authority/sanitary sewage and sewage sludge disposal	Permit issued to hauler of waste from the wastewater treatment facility	Renewed 6/30/04.	Hauler must renew permit by 6/30/05.
Fill Discharge Permit (94-973-29[4])	U.S. Army Corps of Engineers/water	Buttermilk Creek culvert repairs and railroad spur improvements	None	Issued 4/27/00. Expires 4/27/05.
Freshwater Wetlands Permit and Water Quality Certification (9-0422-00005/00093)	NYSDEC/Water	Buttermilk Creek culvert repairs and railroad spur improvements	None	Issued 3/31/00. Expires 4/1/05.
Chemical Bulk Storage (9-000158)	NYSDEC/chemical bulk storage tank	Registration of bulk storage tanks used for listed hazardous chemicals	Cold chemical tanks 65D05 and 65D06 were permanently closed and deleted from the registration on 2/20/04. Cold chemical tanks 65D02, 65D03, 65D04, 65D07, 65D08, 65D09, and 63-V-048 were permanently closed on 11/10/03. A new registration certificate reflecting these closures is anticipated in early 2005.	Registration expires 7/5/05.
Petroleum Bulk Storage (9-008885)	NYSDEC/petroleum bulk storage tank registration	Registration of bulk storage tanks used for petroleum	None	Registration expires 9/2/06. Will be renewed before expiration.
Bird Depredation License (DWP04-041)	New York State Division of Fish and Wildlife	State license for the removal of all nests of migratory birds	License amended and renewed on 7/27/04.	NYS license expires 6/30/05.
Bird Depredation Permit (MB747595-0)	U.S. Fish and Wildlife Service	Federal permit for the limited taking of migratory birds and active bird nests	Permit renewed and modified on 7/16/04.	Permit expires 6/30/05.

Table ECS-3
West Valley Demonstration Project 2004 Air Quality Noncompliance Episodes

Permit Type	Facility	Parameter	Date(s) Exceeded	Description/Solutions
EPA NESHAP	*All*	*All*	*None*	*None*
NYSDEC Air	*All*	*All*	*None*	*None*

There were no episodes of noncompliance in 2004.

Table ECS-4
Status of EPCRA Reporting in 2004

EPCRA Section	Description of Reporting	Status*
EPCRA 302-303	*Planning Notification*	*Not Required*
EPCRA 304	*Extremely Hazardous Substance Release Notification*	*Not Required*
EPCRA 311	*Material Safety Data Sheet*	*Not Required*
EPCRA 312	*Chemical Inventory*	*Yes*
EPCRA 313	*Toxic Release Inventory Reporting*	*Not Required*

* *"Yes" indicates that the site reported under the provision.*
"No" indicates that the site should have reported but did not.
"Not Required" indicates that the site was not required to report under the provision.

Table ECS-5
Reportable Chemicals Above Threshold Planning Quantities Stored at the WVDP in 2004

Hydrogen peroxide solution (35%)
Liquid nitrogen
Oils - various grades
Portland cement
Diesel fuel #2
Gasoline
Ion-exchange media
Sodium hydroxide
Sulfuric acid

Table ECS-6
West Valley Demonstration Project 2004 NPDES/SPDES* Permit Noncompliance Episodes

Permit Type	Outfall(s)	Parameter	No. of Permit Exceptions	No. of Samples Taken	No. of Compliant Samples**	Percent Compliance Samples	Description/ Solutions
SPDES	*All*	*All*	*2*	*1,231*	*1,229*	*99.8%*	*TSS from sediment in a storm event; minimum monitoring frequency for total recoverable hexavalent chromium not met.*
SPDES	*001*	*TSS*	*1*	*16*	*15*	*93.8%*	*See above.*
SPDES	*001*	*Hexavalent Chromium, Total Recoverable*	*1*	*16*	*15*	*93.8%*	*See above.*

* *Radionuclides are not regulated under the site's SPDES permit. However, special requirements in the permit specify that the concentration of radionuclides in the discharge is subject to requirements of DOE Order 5400.5.*

** *Sample count provided for outfall(s) identified in the second column, and parameters identified in the third column.*

Table ECS-7
West Valley Demonstration Project Migratory Bird Nest Depredation Episodes in 2004

Permit/License Type	Parameter	Permit/License Limit	Total Removed in 2004
U.S. Fish and Wildlife - Bird Depredation Permit	*Removal of Active Barn Swallow Nests*	*15*	*0*
U.S. Fish and Wildlife - Bird Depredation Permit	*Removal of Active American Robin Nests*	*15*	*0*
U.S. Fish and Wildlife - Bird Depredation Permit	*Removal of Active Eastern Phoebe Nests*	*5*	*0*
U.S. Fish and Wildlife - Bird Depredation Permit	*Removal of Active Canada Goose Nests*	*5*	*0*
NYSDEC - Bird Depredation License	*Removal of Migratory Bird Nests*	*Not limited*	*5*